

~~CLAIMS~~

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~~1. A biaxially oriented film comprising a polymer alloy composed of polyester (polymer 1) and a thermoplastic resin (polymer 2) other than the polyester as essential components,~~

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5 ~~wherein micro protrusions having a height of 2 to 50 nm are formed at a density of 1,000,000 to 90,000,000/mm² on at least one surface.~~

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10 ~~2. A biaxially oriented film according to Claim 1, wherein the number of the micro protrusions is 3,000,000 to 60,000,000/mm².~~

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~~3. A biaxially oriented film according to Claim 1 or 2, wherein the height of the micro protrusions is 2 to 30 nm.~~

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or
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15 ~~4. A biaxially oriented film according to Claim 1, wherein at least some of the micro protrusions are made of the polymer 1 or the polymer 2.~~

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20 ~~5. A biaxially oriented film according to Claim 4, wherein 30% or more of the micro protrusions are made of the polymer 1 or the polymer 2.~~

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25 ~~6. A biaxially oriented film according to Claim 1, wherein the polymer 2 has a higher glass transition temperature (Tg) than the polymer 1.~~

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30 ~~7. A biaxially oriented film according to Claim 1, wherein the polymer 2 has compatibility with the polymer 1.~~

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35 ~~8. A biaxially oriented film according to Claim 1, wherein the polymer 2 comprises at least one thermoplastic~~

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resin selected from polyimide, polysulfone, and polyethersulfone.

9. A biaxially oriented film according to Claim 8, wherein the polymer 2 comprises polyimide.

10. A biaxially oriented film according to Claim 9, wherein the polymer 2 comprises polyetherimide.

11. A biaxially oriented film according to Claim 1, wherein the polymer 1 comprises polyethylene terephthalate.

12. A biaxially oriented film according to Claim 1, wherein the number of the protrusions having a height of 50 nm or more is $3000/\text{mm}^2$ or less.

13. A biaxially oriented film according to Claim 1, wherein the number of the protrusions having a height of 30 nm or more is $1500/\text{mm}^2$ or less.

14. A biaxially oriented film comprising a film (A layer) according to Claim 1 laminated as at least one of outermost layers of a base layer (B layer).

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as*

15. A biaxially oriented film according to Claim 14 comprising a film (A layer) according to Claim 1 laminated as one of the outermost layers of the base layer (B layer), and another film (C layer) laminated as the opposite outermost layer to form a laminated structure comprising at least three layers including the A layer, the B layer and the C layer.

25 16. A biaxially oriented film according to Claim 14,

*as
can't* wherein the surface roughness R_{aA} on the A layer side is 0.2 to 10 nm, the surface roughness R_{cC} on the C layer side is 1 to 30 nm, and R_{cC} is larger than R_{aA} .

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B6* 17. A biaxially oriented film according to Claim 14,
wherein the base layer (B layer) comprises the polymer 1 or
the polymer alloy composed of the polymer 1 and the polymer
2 as the essential components.

18. A biaxially oriented film according to Claim 14,
wherein the number of the protrusions having a height of 50
nm or more on the A layer side surface is $3000/\text{mm}^2$ or less.

19. A biaxially oriented film according to Claim 14,
wherein the number of the protrusions having a height of 30
nm or more on the A layer side surface is $1500/\text{mm}^2$ or less.

20. A biaxially oriented film according to Claim 14,
wherein the content W_A (% by weight) of the polymer 2 of the
A layer and the content W_B (% by weight) of the polymer 2 of
the B layer satisfies the following relations:

$$0 \leq W_B \leq 40$$

$$5 \leq W_A \leq 50$$

$$10 \leq W_A - W_B \leq 40$$

21. A biaxially oriented film according to Claim 14,
wherein the content W_A (% by weight) of the polymer 2 of the
A layer and the content W_B (% by weight) of the polymer 2 of
the B layer satisfies the following relations:

$$0 \leq W_B \leq 25$$

~~25 ≤ W_A ≤ 40~~

~~10 ≤ W_A - W_B ≤ 40~~

22. A biaxially oriented film according to Claim 14,
wherein the A layer contains substantially no inert particle.

5 23. A biaxially oriented film according to Claim 14,
wherein the A layer contains 0.001 to 2% by weight of inert
particles having an average particle diameter of 0.01 to 2
 μm .

10 24. A biaxially oriented film according to Claim 23,
wherein the A layer contains 0.01 to 1% by weight of inert
particles having an average particle diameter of 0.01 to 1
 μm .

15 25. A biaxially oriented film comprising a laminated
structure of at least three layers including A layer, B
layer and C layer, wherein the A layer comprises a film
composed of polyester and polyetherimide and has a surface
roughness R_{A} of 0.2 to 10 nm, and the layer opposite to the
A layer has a surface roughness R_{C} is 1 to 30 nm.

20 26. A biaxially oriented film according to Claim 25,
wherein the surface roughness R_{A} of the A layer is 0.5 to 5
nm, the surface roughness R_{C} of the layer opposite to the A
layer is 5 to 15 nm, and R_{C} is larger than R_{A} .

25 27. A magnetic recording medium comprising a biaxially
oriented film according to any one of Claims 1 to 26, and a
magnetic layer provided on one side of the biaxially

~~oriented film.~~

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~~28. A magnetic recording medium according to Claim 27,
wherein the magnetic layer comprises a ferromagnetic metal
thin film.~~

5 ~~29. A magnetic recording medium according to Claim 27,
wherein the magnetic layer comprises a ferromagnetic metal
fine powder dispersed in a binder.~~

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